AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph spanning from page 5, line 1, to page 6, line 2, with the following amended paragraph:

Experiments using a high-temperature fuel cell stack have shown that the electrical resistance between the electrical conductor and a bipolar plate formed of ~~$CrFe5Y_2O_31$~~ $\underline{Cr5Fe1Y_2O_3}$ rises, even after a short operating time at normal operating temperatures of between 850° C and 950° C. The designation ~~$CrFe5Y_2O_31$~~ $\underline{Cr5Fe1Y_2O_3}$ represents a chromium alloy that contains 5% by weight of Fe and 1% by weight of Y_2O_3. The increase in the electrical resistance is caused by an oxide layer which contains chromium oxide and even after a short operating period forms on the surface of that side of the bipolar plate which faces that chamber of the high-temperature fuel cell which carries fuel gas, known as the fuel-gas chamber for short. It also forms where the electrical conductor, for example the nickel grid, rests on the bipolar plate or is connected to the bipolar plate, for example by a weld spot or a soldering point. If the electrical conductor, for example the nickel grid, is spot-welded to the bipolar plate, during operation the oxide, amazingly, even migrates under these contact points, which are in the form of weld spots. Chromium oxide has a higher electrical resistance than the unoxidized metals of the bipolar plate. Therefore, there is

an oxide layer of poor conductivity between the electrical conductor and the bipolar plate, and this has an adverse effect on the series resistance of series-connected high-temperature fuel cells. The formation of chromium oxide takes place even at oxygen partial pressures of less than 10^{-18} bar. These oxygen partial pressures are generally also present in the fuel-gas chamber while the high-temperature fuel cell is operating.

Please replace the paragraph on page 11, lines 13 - 18, with the following amended paragraph:

In a further advantageous configuration of the invention, the bipolar plate is formed of ~~$CrFe5Y_2O_31$~~ $\underline{Cr5Fe1Y_2O_3}$, i.e. contains 94% by weight of chromium, 5% by weight of Fe and 1% by weight of Y_2O_3. A bipolar plate of this type has proven to be suitable for operation in a high-temperature fuel cell in numerous tests.

Please replace the paragraph on page 13, lines 2 - 18, with the following amended paragraph:

<u>Description of the Preferred Embodiments</u>:

Referring now to the figures of the drawing in detail and first, particularly, to Fig. 1 thereof, there is shown a

bipolar plate 11 made from ~~$CrFe5Y_2O_31$~~ $\underline{Cr5Fe1Y_2O_3}$ of a high-temperature fuel cell 10. The bipolar plate 11 is provided with a number of webs 12, between which have been formed channels running perpendicularly to the plane of the paper for an operating media. The channels are fed with fuel gas, such as hydrogen, natural gas or methane. Together with further chambers, they form a fuel-gas chamber 13. A wire netting 14 is spot-welded to the bipolar plate 11. The weld spots are not shown for the sake of clarity. The wire netting 14 is electrically and mechanically connected to the bipolar plate 11 via the weld spots. The wire netting 14 is in this case a grid assembly, containing a coarse, thicker support grid 14a and a fine, thinner contact grid 14b. The support grid 14a is a nickel grid, and the contact grid 14b is an iron grid.